

P<sub>1</sub> said computer being capable of performing said  
comparison [is performed] by computing for a selected test  
subarea of said exposed area the values ( $H_T$ ,  $L_T$ ) wherein  $H_T$  is a  
function of the attenuation of said x-rays at the higher energy  
band at said test subarea and  $L_T$  is a function of the attenuation  
of said x-rays at the lower energy band at said test subarea and  
computing for a subarea nearby said test subarea the values ( $H_B$ ,  
 $L_B$ ) wherein  $H_B$  is a function of the attenuation of said x-rays at  
the higher energy band at said nearby subarea and  $L_B$  is a  
function of the attenuation of said x-rays at the lower energy  
band at said nearby subarea, and employing said values ( $H_T$ ,  $L_T$ )  
and ( $H_B$ ,  $L_B$ ) in determining the presence of said specific  
material.

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C2  
P  
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34 (Twice amended) The device of claim 1, 2, 3, 13 or  
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16 further comprising [wherein said means to expose said area  
further comprises an x-ray source, means for generating from said  
source x-rays of at least two substantially different energy  
bands,] means for collimating a fan beam of said x-rays, and  
means for conveying said object to intercept said fan beam of  
said x-rays.

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C3  
K  
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49 (Twice amended) A method of detecting a specific  
material that may be present in an ensemble of objects comprising  
the steps of  
exposing an area of the ensemble to x-ray radiation of  
two substantially different energy bands,

detecting radiation passing through the ensemble and producing dual energy areal image information of said exposed ensemble, and

processing such dual energy information based on differences in attenuation between subareas of said exposed area to detect presence of said specific material by comparing selected subareas of said exposed area to other subareas in the vicinity of said selected subareas, [whereby]

said processing further including performing said comparison [is performed] by computing for a selected test subarea of said exposed area the values ( $H_T$ ,  $L_T$ ) wherein  $H_T$  is a function of the attenuation of said x-rays at the higher energy band at said test subarea and  $L_T$  is a function of the attenuation of said x-rays at the lower energy band at said test subarea and computing for a subarea nearby said test subarea the values ( $H_B$ ,  $L_B$ ) wherein  $H_B$  is a function of the attenuation of said x-rays at the higher energy band at said nearby subarea and  $L_B$  is a function of the attenuation of said x-rays at the lower energy band at said nearby subarea, and employing said values ( $H_T$ ,  $L_T$ ) and ( $H_B$ ,  $L_B$ ) in determining the presence of said specific material.

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REMARKS

Applicants acknowledge with appreciation that the Examiner allowed claims 2 through 11, 13 through 33, 35, 38 through 48, 50 through 55, and 57 through 65. The Examiner rejected claims 1, 34, 37 and 49 under 35 U.S.C. §112 as